

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claim 1 (Cancelled)

Claim 2 (Previously Presented): A process for producing a purified aqueous hydrogen peroxide solution comprising contacting an aqueous hydrogen peroxide solution containing metal ion impurities in a four-step ion exchange resin consisting of

firstly with a H^+ cation exchange resin,

secondly with a fluoride ion (F^-) anion exchange resin,

thirdly with a carbonate ion (CO_3^{2-}) or bicarbonate ion (HCO_3^-) anion exchange resin, and

fourthly with a H^+ cation exchange resin.

Claim 3 (Currently Amended): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim [[1]] 2, wherein the aqueous hydrogen peroxide solution is contacted with an adsorption resin before contacting the H^+ cation exchange resin.

Claim 4 (Currently Amended): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim [[1]] 2, wherein said H^+ cation exchange resin is regenerated by repeating a process, two or more times, in which the cation exchange resin is treated with a downward flowing inorganic acid aqueous solution and then washed with ultra-pure water.

Claim 5 (Currently Amended): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim 2, wherein the carbonate ion (CO_3^{2-}) or bicarbonate ion (HCO_3^-) anion exchange resin is regenerated by repeating a process, two or more times, in which the anion exchange resin is treated with a sodium carbonate or sodium bicarbonate aqueous solution and then washed with ultra-pure water.

Claim 6 (Previously Presented): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim 2, wherein the fluoride ion (F^-) anion exchange resin is regenerated by repeating a process, two or more times, in which the anion exchange resin is treated with at least one fluorine compound aqueous solution selected from the group consisting of sodium fluoride, potassium fluoride and ammonium fluoride and then washed with ultra-pure water.

Claim 7 (Previously Presented): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim 3, wherein the adsorption resin is regenerated by treating with an alcohol aqueous solution as a regenerant and then washing with ultra-pure water.

Claim 8 (Currently Amended): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim 2, wherein the hydrogen peroxide concentration in the aqueous hydrogen peroxide solution is 40 to 70 % by weight.

Claim 9 (Currently Amended): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim 2, wherein said purified aqueous hydrogen peroxide solution is obtained by filtrating solid impurities contained in the aqueous hydrogen peroxide solution to which a flocculating agent has been preliminarily added, by a filter having an average pore size of 0.2 μm or less.

Claim 10 (Original): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim 9, wherein said flocculating agent is at least one phosphorus based compound selected from the group consisting of phosphoric acid, polyphosphoric acid, acidic sodium pyrophosphate, aminotri(methylenephosphoric acid) and salt thereof, and ethelenediaminetetra(methylenephosphoric acid) and salt thereof.

Claim 11 (Original): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim 10, wherein said phosphorus based compound is added in an amount that the atomic ratio (Al/P) of the Al ion impurity contained in the aqueous hydrogen peroxide solution in terms of a metal atom Al to the phosphorus based compound in terms of a phosphorus atom is 0.045 or less.

Claim 12 (Previously Presented): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim 9, wherein the fine filter has an average pore size of 0.1 μm or less.

Claim 13 (Previously Presented): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim 2, wherein the aqueous hydrogen peroxide solution is contacted with an adsorption resin before contacting the H^+ cation exchange resin.

Claim 14 (Cancelled)

Claim 15 (Previously Presented): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim 3, wherein said H^+ cation exchange resin is regenerated by repeating a process, two or more times, in which the cation exchange resin is treated with a downward flowing inorganic acid aqueous solution and then washed with ultra-pure water.

Claim 16 (Cancelled)

Claim 17 (Previously Presented): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim 3, wherein the carbonate ion (CO_3^{2-}) or bicarbonate ion (HCO_3^-) anion exchange resin is regenerated by repeating a process, two or more times, in which the anion exchange resin is treated with a sodium carbonate or sodium bicarbonate aqueous solution and then washed with ultra-pure water.

Claim 18 (Previously Presented): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim 4, wherein the carbonate ion (CO_3^{2-}) or bicarbonate ion (HCO_3^-) anion exchange resin is regenerated by repeating a process, two or more times, in which the anion exchange resin is treated with a sodium carbonate or sodium bicarbonate aqueous solution and then washed with ultra-pure water.

Claim 19 (Previously Presented): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim 3, wherein the fluoride ion (F^-) anion exchange resin is regenerated by repeating a process, two or more times, in which the anion exchange resin is treated with at least one fluorine compound aqueous solution selected from the group consisting of sodium fluoride, potassium fluoride and ammonium fluoride and then washed with ultra-pure water.

Claim 20 (Previously Presented): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim 4, wherein the fluoride ion (F^-) anion exchange resin is regenerated by repeating a process, two or more times, in which the anion exchange resin is treated with at least one fluorine compound aqueous solution selected from the group consisting of sodium fluoride, potassium fluoride and ammonium fluoride and then washed with ultra-pure water.

Claim 21 (Previously Presented): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim 5, wherein the fluoride ion (F⁻) anion exchange resin is regenerated by repeating a process, two or more times, in which the anion exchange resin is treated with at least one fluorine compound aqueous solution selected from the group consisting of sodium fluoride, potassium fluoride and ammonium fluoride and then washed with ultra-pure water.

Claim 22 (Previously Presented): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim 4, wherein the adsorption resin is regenerated by treating with an alcohol aqueous solution as a regenerant and then washing with ultra-pure water.

Claim 23 (Previously Presented): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim 5, wherein the adsorption resin is regenerated by treating with an alcohol aqueous solution as a regenerant and then washing with ultra-pure water.

Claim 24 (Previously Presented): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim 6, wherein the adsorption resin is regenerated by treating with an alcohol aqueous solution as a regenerant and then washing with ultra-pure water.

Claim 25 (Previously Presented): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim 10, wherein the fine filter has an average pore size of 0.1 μm or less.

Response Under 37 CFR 1.116

Expedited Procedure

Examining Group 1754

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Claim 26 (Previously Presented): The process for producing a purified aqueous hydrogen peroxide solution as claimed in claim 11, wherein the fine filter has an average pore size of 0.1 μm or less.